Standard Costing & Process Costing

Time Allowed : 75 Minutes	TEST – 3 (Solution)	Total Marks: 40 Marks

Answer to Question no.1:

1. **More Expenses:-**The Standard are fixed for price and quality of raw material, rate, and efficiency level of workers, variable and fixed overheads. So, the whole procedure will involve additional cost since the fixing of standards require high order of skill (i.e. experts).
2. **Frequents Revision of Standards:-**Future is uncertain and business environment is fast changing. So, the standards may have to be revised at regular intervals. Moreover , the revision of standards is a tedious process.
3. **Bias in fixing the responsibility :-** The causes for the variances may be due to controllable and uncontrollable factors. But, determination of such factors has personal bias and no clear cut norms. Hence, it is very difficult to fix the responsibility of any executive.
4. **Effect on psychology of employees:-**Such standards must be setup which are attainable with reasonable skill and efforts. If standards are fixed at higher level, the employees may have resistance to accept such standards. So, in such case, the standard costing may prove to be a matter of discouragement among employees.
5. **No Freedom at work:-**Whenever the standards are established, the employees cannot work at their own wishes and there is no possibility of developing new ideas.

Answer to Question no.2:

1.Under the normal circumstances, the output of one process is transferred to next process at cost price , i.e, no amount of profit is to be added while transferring the output to the next process.

2.However , if some amount of profit is added while transferring, the profit which is so incorporated is known as inter-process profit.

3.Example:-

Particulars	Operation 1	Operation 2	Operation 3	Total
Received		12,000	20,000	
Cost	10,000	5,000	4,000	19,000
Profit	2,000	3,000	1,000	6,000
	12,000	20,000	25,000	25,000

4.The amount of profit to be considered at various operations (stage) is to be decided by the management as per the prevailing circumstances and practice being adopted.

5.Objective:-

(a) It enable the transferee process to stand on its own efficiency.

(b) It enable in identification of true cost at different stages and comparison with market price of same goods.

Answer to Question no.3:

(a) Variable Overheads Cost Variance= Output Absorbed VO – Actual VO

= (Actual Output) Budgeted VO/Unit) – Actual VO

$$= (3{,}800 \text{ Units})\left(\frac{₹\ 12{,}000}{4{,}000 \text{ units}} = ₹\ 3 \text{ p.u.}\right) - ₹\ 12{,}000$$

= ₹ 11,400 – ₹ 12,000 = ₹ 600 (A)

(b) Fixed Overheads Expenditure Variance= Budgeted FO – Actual FO

= ₹ 40,000 – ₹ 39,000 = ₹ 1,000 (F)

(c) Fixed Overheads Volume Variance= Output Absorbed FO – Budgeted FO

= ₹ 38,000 – ₹ 40,000 = ₹ 2,000 (A)

Output Absorbed FO = Actual Output × Budgeted FO/Unit

$$= (3{,}800 \text{ Units})\left(\frac{₹\ 40{,}000}{4{,}000 \text{ units}} = ₹\ 10 \text{ p.u.}\right) = ₹\ 38{,}000$$

Answer to Question no.4:

Worker	SR × SHAO	SR × RSH	SR × AHW	AR ×AHP	AR × AHP
	L_1	L_2	L_3	L_4	L_5
Skilled	45 × 2,340 = 1,05,300	45 × 2,470 = 1,11,150	45 × 1,900 = 85,500	45 × 2,000 = 90,000	50 × 2,000 = 1,00,000
Semi-skilled	30 × 720 = 21,600	30 × 760 = 22,800	30 × 1,140 = 34,200	30 × 1,200 = 36,000	35 × 1,200 = 42,000
Un-skilled	15 × 540 = 8,100	15 × 570 = 8,550	15 × 760 = 11,400	15 × 800 = 12,000	10 × 800 = 8,000
	1,35,000				

Actual Hours Paid (AHP)	Actual Hours Worked (AHW)
Skilled = 50 × 40 = 2,000 hrs.	Skilled = 50 × 38 =1,900 hrs.
Semi-skilled = 30 × 40 = 1,200 hrs.	Semi-skilled = 30 × 38 = 1,140 hrs.
Un-skilled = 20 × 40 = 800 hrs.	Un-skilled = 20 × 38 = 760 hrs.

Revised Standard Hours (RSH)

Total of AHW = 3,800 hrs.
Budgeted Ratio = 65:20:15
Skilled = 2,470 hrs.
Semi-skilled = 760 hrs.
Un-skilled = 570 hrs.

Budgeted Hours Per Unit of Output

Output	Budgeted hours			
	Skilled	Semi-skilled	Un-skilled	Total
2,000 units	65 × 40 = 2,600 hrs.	20 × 40 = 800 hrs.	15 × 40 = 600 hrs.	4,000 hrs.
1 unit	1.3 hrs.	0.4 hr.	0.3 hr.	2 hrs.

SHAO = Actual Output × Budgeted hours per unit

Skilled = 1,800 × 1.3 = 2,340 hrs.
Semi-skilled = 1,800 × 0.4 = 720 hrs.
Un-skilled = 1,800 × 0.3 = 540 hrs.

Computation of Labour Cost Variances

Worker	DLCV	DLRV	ITV	DLEV	DLMV	DLYV
	$(L_1 - L_5)$	$(L_4 - L_5)$	$(L_3 - L_4)$	$(L_1 - L_3)$	$(L_2 - L_3)$	$(L_1 - L_2)$
Skilled	₹ 5,300 (F)	₹ 10,000 (A)	₹ 4,500 (A)	₹ 19,800 (F)	₹ 25,650 (F)	₹ 5,850 (A)
Semi-skilled	₹ 20,400 (A)	₹ 6,000 (A)	₹ 1,800 (A)	₹ 12,600 (A)	₹ 11,400 (A)	₹ 1,200 (A)
Un-skilled	₹ 100 (F)	₹ 4,000 (F)	₹ 600 (A)	₹ 3,300 (A)	₹ 2,850 (A)	₹ 540 (A)
	₹ 15,000 (A)	**₹ 12,000 (A)**	**₹ 6,900 (A)**	**₹ 3,900 (F)**	**₹ 11,400 (F)**	**₹ 7,500 (A)**

Alternative Method of Calculating DLYV

DLYV = (Standard cost per unit) (Actual Output – Expected Output in Actual Input)

$$= \left(\frac{₹\ 1,35,000}{1,800\ \text{Units}}\right)\left(1,800\ \text{Units} - \frac{3,800\ \text{hrs.}}{2\ \text{hrs. p.u.}}\right) = (₹\ 75\ \text{p.u.})\ (1.800\ \text{Units} - 1,900\ \text{Units}) = ₹\ 7,500\ (A)$$

Answer to Question no.5:

Particulars	P (₹)	Q (₹)	Total (₹)
Final Sales Value	8,000 ×13.75 = 1,10,000	6,000 ×8.75 = 52,500	1,62,500
(-) Expected Profit $\left(\frac{1}{4}\text{ of cost} = \frac{1}{5}\text{ of sales}\right)$	(22,000)	(10,500)	(32,500)
(-) Separate Cost	8,000 ×5= (40,000)	6,000 ×4= (24,000)	(64,000)
Net Realisable Value	48,000	18,000	66,000
Share in Joint Cost	P=88,000 × 8/11 **= 64,000**	Q= 88,000 × 3/11 **= 24,000**	**88,000**

Answer to Question no.6:

Process III A/c

Particulars	Units	Amount (₹)		Units	Amount (₹)
To Opening W.I.P.	2,000	25,750	By Normal Loss	2,500	7,500
To Process II A/c	53,000	4,11,500	By Process IV	48,000	7,19,750
To Direct Materials		1,97,600	By Closing WIP	5,000	61,500
To Direct Wages		97,600			
To Production Overheads		48,800			
To Abnormal Gain	500	7,500			
	55,500	**7,88,750**		**55,500**	**7,88,750**

Normal Loss = $\frac{5}{100}$ [Opening WIP + Units from Process II – Closing WIP]

= $\frac{5}{100}$ (2,000 + 53,000 – 5,000) = 2,500 units

Statement of Equivalents Production (FIFO)

Units	Particulars	Units	Material (1)		Material (2)		Labour		Overhead	
In		Out	%	Quantity	%	Quantity	%	Quantity	%	Quantity
2,000	Op. WIP, completed	2,000	–	–	20	400	40	800	400	800
53,000	Introduced and completed	46,000	100	46,000	100	46,000	100	46,000	100	46,000
	Transferred	48,000								
	Normal Loss	2,500	–	–	–	–	–	–	–	–
	Closing WIP	5,000	100	5,000	70	3,500	50	2,500	50	2,500
	Abnormal Gain	(500)	100	(500)	100	(500)	100	(500)	100	(500)
55,000		**55,000**		**50,500**		**49,400**		**48,800**		**48,800**

Statement of Cost per unit

Type of Cost		Amount (₹)	Equivalent Units	Cost per unit(₹)
Material (1)	4,11,500			
(-) Normal loss	7,500	4,04,000	50,500	8
Material (2)		1,97,600	49,400	4
Labour		97,600	48,800	2
Overheads		48,800	48,800	1

Statement of Value of Equivalent Production

Opening WIP, now completed	Material (1)	–	8	–	
	Material (2)	400	4	1,600	
	Labour	800	2	1,600	
	Overhead	800	1	800	4,000
Introduced and completed	Material (1)	46,000	8	3,68,000	
	Material (2)	46,000	4	1,84,000	
	Labour	46,000	2	92,000	
	Overhead	46,000	1	46,000	6,90,000
Abnormal Gain	Material (1)	500	8	4,000	
	Material (2)	500	4	2,000	
	Labour	500	2	1,000	
	Overhead	500	1	500	7,500
Closing WIP	Material (1)	5,000	8	40,000	
	Material (2)	3,500	4	14,000	
	Labour	2,500	2	5,000	
	Overhead	2,500	1	2,500	61,500

Computation of Total Cost of 48,000 units transferred to Process IV

2,000 units of Opening WIP		
– Cost already incurred		25,750
– Cost now incurred	4,000	29,750
46,000 Units out of introduced units	6,90,000	7,19,750